

IN THE CLAIMS:

Please amend the claims as indicated below, without prejudice:

1. (Twice Amended) A transmission device comprising:

a first rotational member configured for attachment to a means for rotating said first rotational member about a center of rotation;

a first translational member configured for transmitting force to a means for using said force;

connecting means for operatively connecting the first rotational member and the first translational member such that movement of one of said translational member and rotational member causes movement of the other of said translational member and rotational member, wherein a portion of the connecting means is pivotally connected to the first rotational member at a first radial attachment point removed from the center of rotation of said first rotational member such that said first radial attachment point and said center of rotation define a first attachment radius; and

adjusting means for (i) varying a location of the first radial attachment point responsive to rotational speed of the first rotational member to thereby increase and decrease the first attachment radius and (ii) maintaining said radius at a first radial length responsive to a faster constant rotational speed of the first rotational member, and maintaining said radius at a second, different radial length responsive to a slower constant rotational speed of said first rotational member.

20. (Twice Amended) The transmission device of claim 19:

wherein a reference member resides in a substantially fixed location with respect to a center of the first rotational [force-transmitting] member;

wherein the transmission device further comprises a cylinder in which the [second force-transmitting member comprises a] first translational member is confined to a cycle of reciprocating linear movement toward and away from the reference member responsive to rotational movement of the first[,] rotational [force-transmitting] member, wherein the cycle of reciprocating linear movement is defined between a distal position and a proximal position of said first translational member;

wherein the adjusting means further comprises means for varying the length of the connecting means [arm] sufficient to maintain the distal position of the cycle of reciprocating linear movement in substantially the same location with respect to the reference member.

32. (Twice Amended) A transmission device comprising:

a first, rotational, force-transmitting member configured for attachment to a means for rotating said first rotational member;

a second force-transmitting member;

a connecting arm having a first portion pivotally connected to the first, rotational force-transmitting member at a first pivot attachment point, and a second portion pivotally connected to the

second force-transmitting member at a second pivot attachment point, in a manner sufficient to cause said second force-transmitting member to engage in movement responsive to movement of said first, rotational force-transmitting member at a first ratio of movement of said first, rotational force-transmitting member to said second force transmitting member; and

adjusting means for (i) varying a location of one of the pivotal attachment points responsive to rotational speed of the first, rotational, force-transmitting member to thereby increase and decrease the first ratio of movement, (ii) maintaining said radius at a first radial length responsive to a faster constant rotational speed of the first, rotational force-transmitting member, and maintaining said radius at a second, different radial length responsive to a slower constant rotational speed of said first, rotational force-transmitting member, and (iii) varying a length of the connecting arm responsive to the varying of the location of said one of the pivotal attachment points.

35. (Twice Amended) A transmission device comprising:

a first rotational member configured for attachment to a means for rotating said first rotational member about a center of rotation;

a first translational member configured for transmitting force to a means for using said force;

a first connecting arm having a first portion pivotally connected to the first translational member at a first pivot point,

and a second portion pivotally connected to the first rotational member at a first radial attachment point removed from the center of rotation of said first rotational member such that said first radial attachment point and said center of rotation define a first attachment radius;

adjusting means for (i) varying a location of the first radial attachment point responsive to rotational speed of the first rotational member to thereby increase and decrease the first attachment radius and (ii) maintaining said radius at a first radial length responsive to a faster constant rotational speed of the first rotational member, and maintaining said radius at a second, different radial length responsive to a slower constant rotational speed of said first rotational member;

wherein the adjusting means further comprises means for varying the location of the radial attachment point during rotation of the first rotational member;

wherein the first rotational member includes a perimeter defining an interior area, and wherein less than a majority of said interior area comprises an opening;

wherein movement of the first rotational member and movement of the first translational member define a first ratio of movement of said first rotational member to said first translational member, and wherein the adjusting means further comprises means for varying the location of the radial attachment point without varying a location of the first pivot point relative to the first

translational member to thereby change the first ratio of movement to a second ratio of movement;

wherein the adjusting means further comprises means for continuously varying the location of the first radial attachment point to thereby continuously vary a first ratio of movement of the first rotational member to the first translational member.

37. (Twice Amended) A method for transmitting force among gear members and varying a gear ratio of movement said gear members, said method comprising the steps of:

(a) pivotally connecting a first portion of a connecting arm to a first translational member at a first pivot point, and pivotally connecting a second portion of the connecting arm to a first rotational member at a first radial attachment point removed from a center of rotation of the first rotational member such that said first radial attachment point and said center of rotation define a first attachment radius, such that dynamic force from rotational movement of the first rotational member is transmitted by the connecting arm to the first translational member; and

(b) varying a location of the first radial attachment point responsive to rotational speed of the first rotational member to thereby increase and decrease the first attachment radius and change a first ratio of movement of said first rotational member to the first translational member, and maintaining said first attachment radius at a first radial length responsive to a faster constant rotational speed of the first rotational member, and

maintaining said radius at a second, different radial length responsive to a slower constant rotational speed of said first rotational member.

38. (Once Amended) A transmission device comprising:

a circular wheel having the shape of a circle and being configured for attachment to a means for rotating said circular wheel about a center of rotation;

a first translational member configured for transmitting force to a means for using said force;

connecting means for operatively connecting the circular wheel and the first translational member such that movement of one of said translational member and circular wheel causes movement of the other of said translational member and circular wheel, wherein a portion of the connecting means is pivotally connected directly onto the circular wheel at a first radial attachment point removed from the center of rotation of said circular wheel such that said first radial attachment point and said center of rotation define a first attachment radius; and

adjusting means for alternately (i) holding the first radial attachment point at a fixed location on the wheel, with respect to the center of rotation of said wheel, during rotational movement of said wheel, such that the first radial attachment point is prevented from sliding freely with respect to said wheel, [and] (ii) varying a location of the first radial attachment point on the wheel during rotational movement of said wheel to thereby increase